



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,590	07/02/2007	Osamu Fujita	1560-0471PUS1	5637

2292 7590 09/22/2008
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

DAY, HERNG DER

ART UNIT	PAPER NUMBER
----------	--------------

2128

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

09/22/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/594,590	Applicant(s) FUJITA, OSAMU	
	Examiner HERNG-DER DAY	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/28/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-4 have been examined and rejected.

Priority

2. Acknowledgment is made of Applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy of the priority document for PCT/JP2005/004452, filed on March 14, 2005, has been received in this National Stage application from the International Bureau. The priority date is March 30, 2004.

Drawings

3. The drawings filed on July 2, 2007, are objected to for the following reason. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the Examiner, the Applicants will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Art Unit: 2128

3-1. In FIG. 9, $S(k)$ has the same signal as $SU(k)=SD(k-1)$. However, as described in the specification in lines 6-8 of page 20, $S(k)$ is the output of the match comparator 424, which may be different from $SU(k)=SD(k-1)$.

Abstract

4. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Specification

5. The disclosure is objected to because of the following informalities. Appropriate correction is required.

5-1. It appears that “the index number of a *resister*”, as described in line 22 of page 23, should be “the index number of a *register*”.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for storing an importance of each component, does not reasonably provide enablement for storing a plurality of sets of importance of a given component. The specification

Art Unit: 2128

does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

7-1. Independent claim 1 recites, “the important component selection apparatus has a function of *storing a plurality of sets of importance of a given component* and a component identifier that indicates which component the importance represents” in lines 11-14 of the claim. However, as described in the specification in lines 11-12 of page 12, “The important component selection apparatus 13 has a function of *storing an importance of each component* and a component identifier”. In other words, the specification has only allowed *storing an importance of each component*. The specification has not disclosed allowing for *storing a plurality of sets of importance of a given component* in the important component selection apparatus. Therefore, the specification does not enable any person skilled in the art to which it pertains to use the invention commensurate in scope with these claims. Dependent claims are rejected as being dependent on a rejected claim.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9-1. Claim 1 recites the limitation, “updating data on *the component* stored in the data storage apparatus” in lines 18-19 of the claim. It is indefinite because it is unclear whether “*the component*” is referred to “*a component* having high importance” as recited in lines 5-6 of the

Art Unit: 2128

claim or “*a component* related to the component having high importance” as recited in lines 16-17 of the claim. Dependent claims are rejected as being dependent on a rejected claim.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1 and 4 are rejected under 35 U.S.C. 101 because the inventions as disclosed in claims are directed to non-statutory subject matter.

11-1. Claims 1 and 4 are directed to priority based data processing. However, with the broadest reasonable interpretation, the claimed apparatus could be a software system comprising various software modules, i.e., software programming per se, and hence nonstatutory.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Inoue et al., U.S.

Patent Application Publication No. 2005/0188373 A1 published August 25, 2005, and filed February 20, 2004.

Art Unit: 2128

13-1. Regarding claim 1, Inoue et al. disclose a method and apparatus for priority based data processing, comprising:

a data storage apparatus that stores data comprised of a plurality of components (the initial storage of the processor tasks 110 within the shared memory 106, paragraph [0067], lines 6-10);

an important component selection apparatus that selects a component having high importance (In order to aid in the identification of the first (or head) entry of the linked list, the sub-processing units 102 preferably also have access to a task queue 282, which is conceptually illustrated in FIG. 7. The task queue 282 preferably includes an entry for each priority level of the associated processor tasks 110, paragraph [0085], lines 6-11); and

a data processing apparatus that performs data processing programmed for each component (permitting the sub-processing units to determine which of the processor tasks should be copied from the shared memory and executed based on priorities of the processor tasks, paragraph [0008], lines 6-9), wherein

the important component selection apparatus has a function of storing a plurality of sets of importance of a given component and a component identifier that indicates which component the importance represents, in descending order of importance, and a function of outputting a component identifier of a component having highest importance on a priority basis (In order to aid in the identification of the first (or head) entry of the linked list, the sub-processing units 102 preferably also have access to a task queue 282, which is conceptually illustrated in FIG. 7. The task queue 282 preferably includes an entry for each priority level of the associated processor tasks 110, paragraph [0085], lines 6-11),

the data processing apparatus has a function of performing data processing on a component related to the component having high importance, which is indicated by the important component selection apparatus (the respective sub-processing units 102 that are allocated to execute the pool of processor tasks 110 (preferably within a given area 106A or 106B) of the shared memory 106 first access the task table 280 to determine which processor task 110 should be taken up next for execution, paragraph [0085], lines 1-6), and then updating data on the component stored in the data storage apparatus according to a result of the data processing and re-evaluating the importance of a changed component and sending out an updated value of the changed component to the important component selection apparatus (When a processor task is given precedence over other processor tasks, it is preferred that a dispatch occurs immediately and that the task is moved into the RUNNING state, paragraph [0103]), and

the apparatuses can perform these functions parallelly and simultaneously (The sub-processing units 208 perform the processing of data and applications, preferably in a parallel and independent manner, paragraph [0074], lines 1-6).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Reference to Welland et al., U.S. Patent 5,247,677 issued September 21, 1993, is cited as disclosing stochastic priority-based task scheduler.

Reference to Iwasaki et al., U.S. Patent 5,274,809 issued December 28, 1993, is cited as disclosing task execution control method.

Art Unit: 2128

15. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kamini S. Shah can be reached on (571) 272-2279. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Herng-der Day/
Examiner, Art Unit 2128

September 15, 2008

/Thai Phan/
Primary Examiner, Art Unit 2128

September 15, 2008